

## WHAT IS CLAIMED IS:

1       1. An anisotropically conductive sheet that exhibits  
2 conductivity in its thickness-wise direction, which  
3 comprises a semiconductive part that exhibits  
4 semiconductivity in the plane direction of the sheet.

1       2. The anisotropically conductive sheet according to  
2 Claim 1, wherein the volume resistivity of the  
3 semiconductive part is  $10^{-7}$  to  $10^4 \Omega\text{m}$ .

1       3. The anisotropically conductive sheet according to  
2 Claim 1, wherein the surface resistivity of the  
3 semiconductive part is  $10^{-1}$  to  $10^{10} \Omega/\square$ .

1       4. An anisotropically conductive sheet comprising a  
2 plurality of conductive parts each extending in the  
3 thickness-wise direction of the sheet and semiconductive  
4 parts each exhibiting semiconductivity in the plane  
5 direction of the sheet and formed so as to surround each  
6 of the conductive parts.

1       5. An anisotropically conductive sheet comprising a  
2 plurality of conductive parts each extending in the  
3 thickness-wise direction of the sheet, insulating parts  
4 formed so as to surround each of the conductive parts, and  
5 semiconductive parts each exhibiting semiconductivity in  
6 the plane direction of the sheet and formed so as to

7 surround each of the insulating parts.

1       6. An anisotropically conductive sheet comprising a  
2 base sheet exhibiting semiconductivity in its plane  
3 direction and conductive particles contained in the base  
4 sheet in a state oriented so as to be arranged in the  
5 thickness-wise direction of the base sheet.

1       7. The anisotropically conductive sheet according to  
2 Claim 1, wherein the semiconductive parts or base sheet  
3 contains at least one conductive substance selected from  
4 among conductive organic substances, amine type organic  
5 conductive substances, conductive polymers, metallic  
6 particles and carbon black.

1       8. The anisotropically conductive sheet according to  
2 Claim 1, wherein the semiconductive parts or base sheet  
3 contains a sodium salt of an alkylsulfonic acid as a  
4 conductive substance.

1       9. A process for producing the anisotropically  
2 conductive sheet according to Claim 4, which comprises the  
3 steps of forming a sheet-forming material layer with  
4 conductive particles which exhibit magnetism, and a  
5 semiconductivity-imparting substance contained in a  
6 polymer-forming material which will become an elastic  
7 polymeric substance by curing, applying a parallel

8 magnetic field having an intensity distribution to the  
9 sheet-forming material layer in the thickness-wise  
10 direction thereof and subjecting the sheet-forming  
11 material layer to a curing treatment.

1        10. A process for producing the anisotropically  
2 conductive sheet according to Claim 4, which comprises the  
3 steps of providing a sheet for semiconductive part  
4 exhibiting semiconductivity, in which through-holes or  
5 openings have been formed, forming a layer of a material  
6 for conductive part containing conductive particles, which  
7 exhibit magnetism, in a polymer-forming material which  
8 will become an elastic polymeric substance by curing, in  
9 each of the through-holes or openings in the sheet for  
10 semiconductive part, applying a parallel magnetic field or  
11 a parallel magnetic field having an intensity distribution  
12 to the layer of the material for conductive part in the  
13 thickness-wise direction thereof and subjecting the layer  
14 of the material for conductive part to a curing treatment.

1        11. A process for producing the anisotropically  
2 conductive sheet according Claim 6, which comprises the  
3 steps of forming a sheet-forming material layer with  
4 conductive particles which exhibit magnetism, and a  
5 semiconductivity-imparting substance contained in a  
6 polymer-forming material which will become an elastic  
7 polymeric substance by curing, applying a parallel

8 magnetic field to the sheet-forming material layer in the  
9 thickness-wise direction thereof and subjecting the sheet-  
10 forming material layer to a curing treatment.

1           12. A connector formed of the anisotropically  
2 conductive sheet according Claim 1.

1           13. A method for inspecting a circuit device, which  
2 comprises conducting electrical inspection of the circuit  
3 device using the connector according to Claim 12.

1           14. An anisotropically conductive sheet comprising  
2 an anisotropically conductive sheet member having  
3 conductivity in its thickness-wise direction and a static  
4 charge-eliminating layer integrally provided on at least  
5 one surface of the sheet member.

1           15. An anisotropically conductive sheet comprising an  
2 anisotropically conductive sheet member provided with a  
3 plurality of conductive parts each extending in the  
4 thickness-wise direction of the sheet member in a state  
5 mutually insulated by insulating parts, and a static  
6 charge-eliminating layer provided on at least one surface  
7 of each of the insulating parts in the sheet member.

1           16. The anisotropically conductive sheet according to  
2 Claim 15, wherein the static charge-eliminating layer is

3 provided on the insulating parts in the sheet member.

1       17. The anisotropically conductive sheet according to  
2 Claim 14, wherein the static charge-eliminating layer is  
3 composed of a layer containing a conductive organic  
4 substance, amine type organic conductive substance, metal  
5 or carbon black, a layer of a thermosetting resin or  
6 thermoplastic resin containing a conductive substance  
7 therein, or a layer formed of a conductive polymer.

1       18. The anisotropically conductive sheet according to  
2 Claim 14, wherein the static charge-eliminating layer is  
3 formed of a metallic layer.

1       19. The anisotropically conductive sheet according to  
2 Claim 14, wherein the static charge-eliminating layer is  
3 formed of a layer, which contains a sodium salt of an  
4 alkylsulfonic acid.

1       20. A process for producing the anisotropically  
2 conductive sheet according to Claim 14, which comprises  
3 the steps of coating a sheet member with a flowable  
4 composition for forming a static charge-eliminating layer,  
5 which contains a conductive substance and a binder or a  
6 curable material which will become a binder to form a  
7 coating film, and then subjecting the coating film to a  
8 drying treatment and/or a curing treatment, thereby

9 forming the static charge-eliminating layer.

1        21. A process for producing the anisotropically  
2 conductive sheet according to Claim 14, which comprises  
3 the steps of bonding a film for static charge-eliminating  
4 layer to become a static charge-eliminating layer to a  
5 sheet member, thereby forming the static charge-  
6 eliminating layer.

1        22. A connector formed of the anisotropically  
2 conductive sheet according to Claim 14.

1        23. A method for inspecting a circuit device, which  
2 comprises conducting electrical inspection of the circuit  
3 device using the connector according to Claim 22.

1        24. An anisotropically conductive sheet comprising an  
2 anisotropically conductive sheet member having  
3 conductivity in the thickness-wise direction of the sheet  
4 member and formed of an elastic polymeric substance, a  
5 conductive part for connection to be connected to an  
6 external device or terminal of an electronic part, and at  
7 least one conductive part for static-charge elimination to  
8 be connected to a ground.

1        25. The anisotropically conductive sheet according to  
2 Claim 24, wherein the sheet member is provided with a

3       plurality of conductive parts for connection each  
4       extending in the thickness-wise direction of the sheet  
5       member in a state mutually insulated by insulating parts,  
6       and the conductive part for static-charge elimination is  
7       arranged in a blank region outside a region, in which the  
8       conductive part for connection is arranged, in the sheet  
9       member.

1           26. The anisotropically conductive sheet according to  
2       Claim 24, wherein the sheet member is constructed by  
3       arranging at least one conductive part for static-charge  
4       elimination in a state dispersively in the blank region.

1           27. The anisotropically conductive sheet according to  
2       Claim 24, wherein the sheet member is constructed by  
3       arranging at least one conductive part for static-charge  
4       elimination about the region in which the conductive part  
5       for connection is arranged.

1           28. The anisotropically conductive sheet according to  
2       Claim 24, wherein the conductive parts for static-charge  
3       elimination contains at least one conductive substance  
4       selected from among metallic particles, conductive metal  
5       oxides, conductive organic substances and carbon black.

1           29. The anisotropically conductive sheet according to  
2       Claim 24, wherein the conductive parts for static-charge

3 elimination have the same structure as the conductive part  
4 for connection.

1           30. The anisotropically conductive sheet according to  
2 Claim 24, wherein the conductive parts for static-charge  
3 elimination have the same composition as the conductive  
4 part for connection.

1           31. A connector formed of the anisotropically  
2 conductive sheet according Claim 24.

1           32. A method for inspecting a circuit device, which  
2 comprises conducting electrical inspection of the circuit  
3 device using the connector according to Claim 31.